

**This Number Must be on Invoice, Voucher  
and Delivery Memos.**

If subject to discount please  
indicate on invoice.

# Everything Ice, Inc.  
115 School St.,  
P.O. Box 250  
Salix, PA 15952

<b>TOTAL AMOUNT OF ORDER</b> .....	<b>\$ 59,200.00</b>
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## SALES AGREEMENT

- 1) Everything Ice, Inc., a Pennsylvania corporation, with offices located at 115 School Street, PO Box 250, Salix, PA 15952, Seller, hereby sells the goods described in Paragraph 2 to customer: West Lafayette Board of Parks & Recreation (Buyer).
- 2) The goods being sold under this Agreement are: 120' x 70' Portable Rink Piping System with Concrete Repair Process OPTION as more fully described in attached Exhibits A, B, C, D, E, F which include the equipment schedule of value, specifications, and scopes of work.
- 3) The full purchase price for the system above described is: Fifty Nine Thousand, Two Hundred Dollars and zero cents (\$ 59,200.00), exclusive of any state or sales taxes, import duty or shipping, payable as follows:
  - A) Payment of 35% to initiate the custom manufacture of the floor system, 30% upon completion of manufacture, 30% upon shipment, and 5% upon complete assembly.
  - B) Invoices to be submitted for each installment.
  - C) The Change Order Option Amount for Concrete Rink Floor Repair is \$ 63,850.
  - D) Should the concrete repair option be selected prior to June 1, 2010, Everything Ice, Inc. will provide a trade-in of the piping system of \$ 24,500.00. Against the cost of the concrete repair process.
  - E) Everything Ice, Inc. will provide a three year guarantee for the repair work provided.
  - F) Late payments shall be subject to interest at the rate of 1.5% per month.
  - G) Any additions or deductions from the sum above listed must be made by written Change Order(s).
  - H) Any Sales and/or Use Tax, Import Duties, and shipping as applicable to the product and/or services are the responsibility of Buyer.
- 4) Everything Ice, Inc. shall ship system to Buyer at: 501 W 350 N, West Lafayette Parks & Recreation Maintenance Barn, West Lafayette, IN, 47906. All materials shipped F.O.B. Stock Location. Upon shipment of System, risk of loss is assumed by Buyer. Shipping quotes are estimated. True shipping costs will be invoiced separately.
- 5) Estimated shipping schedule of product will be approximately 5 to 6 weeks after receipt of the deposit, and the signature date by Everything Ice representative accepting the order, whichever is later. All materials shipped to the job site, to be stored, will be paid for as previously indicated.
- 6) Everything Ice, Inc. is the legal owner of said materials and/pr systems and certifies that it is free and clear of all liens and encumbrances.
- 7) Title to goods is retained by Everything Ice, Inc. until payment of full purchase price. Buyer agrees to keep the goods safely and free from any and all liens and encumbrances. The full balance shall become due on default, with the Buyer paying all reasonable attorney fees and costs of collection. Upon default, Everything Ice, Inc. shall have the right to retake the goods hold and dispose of them and collect expenses, together with any deficiency due from Buyer; but subject to the Everything Ice, Inc. right to redeem pursuant to law. Notwithstanding any provision herein, the prevailing party shall be entitled to reasonable costs of litigation, including reasonable attorney's fees.
- 8) This Agreement constitutes the entire Agreement between the parties, except for

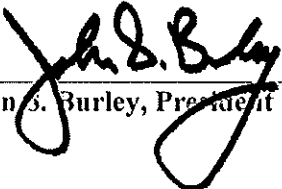
modifications issued after the execution of this Agreement.

9) This Agreement shall not be amended, except in writing, signed by both parties. This Agreement shall be interpreted and enforced according to the laws of the Commonwealth of Pennsylvania in the event of any litigation here under.

10) This agreement supersedes any and all other Contracts and/or Agreements heretofore existing between the parties.

11) This Agreement shall be binding and inure to the benefit of the parties, their successors, assigns and personal representatives.

Everything Ice, Inc.

 Pres. 10-2-09  
John S. Burley, President Date

West Lafayette Board of Parks & Recreation


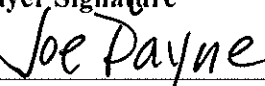
 Supt. 10/2/09  
Buyer Signature Date  
  
Printed Name

EXHIBIT "A"

Purchase of Equipment and Professional Services to  
Replace the Riverside Skating Center Cooling Floor

QUOTE SHEET

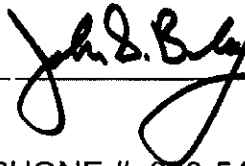
The Contractor will be responsible for providing the Purchase of Equipment and Professional Services to Replace the Riverside Skating Center Cooling Floor, per the provided Specifications.

TOTAL LUMP SUM COST:

\$59,200.00

CONTRACTOR'S NAME: Everything Ice, INC.

AUTHORIZED SIGNATURE: \_\_\_\_\_

A handwritten signature in black ink, appearing to read "John D. Bly", is written over a horizontal line.

DATE: August 28, 2009

PHONE #: 888-543-0921 Ext 6

## EXHIBIT "B"

### Request for Quote

This Request for Quote is the official notice of needed professional services by the West Lafayette Board of Public Works and Safety (the "Board").

Board is requesting quotes for providing the Purchase of Equipment and Professional Services to Replace the Riverside Skating Center Cooling Floor, per the provided Specifications. Any required permits will be provided by the owner.

The Contractor shall be responsible for the coordination of all work with the West Lafayette Parks and Recreation Department.

To be considered, quotes need to be submitted on the enclosed Quote Sheet to Clerk-Treasurer, City of West Lafayette, 609 W. Navajo St., West Lafayette, IN 47906 before 8:30 am, local time, on August 31, 2009. Quotes should be submitted in a sealed envelope identified by "Services to Replace the Riverside Skating Center Cooling Floor" on the outside of the envelope.

Quotes will be taken under consideration for the issuance of a purchase order to the most responsive and responsible firm which provides a quote most advantageous to Board.

Any questions concerning this Request for Quote should be directed to: Lee Booth, Parks Director, West Lafayette Parks and Recreation, (765)775-5125, [lbooth@westlafayette.in.gov](mailto:lbooth@westlafayette.in.gov) or Joe Payne, Superintendent, West Lafayette Parks and Recreation, (765)775-5110, [jpayne@westlafayette.in.gov](mailto:jpayne@westlafayette.in.gov).

# EXHIBIT "C"

## Specifications for the Purchase of Equipment and Professional Services to Replace the Riverside Skating Center Cooling Floor

### General Requirements:

To provide a modular cooling floor system to replace the failed cooling slab at Riverside Skating Center, with the replacement system to work with the existing refrigeration and railing system to allow proper mobilization of the facility for the ice skating season.

### Required Timing:

The installation of the new modular cooling floor system and the completion of ice-make, ready for public opening, shall be during any period of seven (7) consecutive days in November, 2009 and no later than November 25, 2009.

### Equipment and Professional Services to be provided by Supplier:

1. Professional supervision of the final draining and air-pressure-out of as much of the existing cooling slab's glycol as possible for collection within empty drums.
2. The splicing-in of two (2) new Sch80PVC butterfly valves (6") at the most reasonable point of the existing system, on which to field-connect a "center-feed" portable, modular rink header system; additional Sch80PVC 6" to 4" piping section to allow header to system to "T" at this location.
3. The Icemat-2 portable, modular cooling grid system, sized 120.5' x 74', "side-feed" header along one side of rink; under "end" dasher 3" each end; u-bends under the non-header side of rink; measure to the "outside" of the rear header. Final rink size to conform to existing 120' x 70' rink, with 20'0" radius corners on u-bend to be custom fabricated (final cut and clamp on jobsite for radius sections) to match existing dashers.
4. U.V.-treatment for the above tubing, for use in direct sun.
5. Propylene glycol charge for mat system and headers only; assumes that all of the existing mechanical room area and underground transmission piping shall be full of glycol. Twelve (12)-drums, to allow 35%-mix, with reserve quantity.
6. Empty poly drums (12) for off-season storage of rink-floor glycol.
7. Three-year limited warranty; material replacement only.
8. Poly spacer block (1-1/4"Hx4"Wx6"L) to lift existing dasher system to allow piping to pass-under.
9. Professional supervisors (2) for a maximum four (4)-day period, with work planned within that time to assemble the entire rink grid system above, supervise fill and air-out the existing system and new portable system,

- supervise the remounting of the dasher board system, glycol-fill of the new rink system, assist Customer with start-up of existing chiller, and provide general consultation and direction of the making of the base ice-sheet.
10. Insurance coverage per the attached Insurance Requirements.
  11. All travel (airfare, auto transportation, meal) expenses for out-of-town personnel.
  12. All transportation and freight, delivered to West Lafayette, IN.

### Payment Terms:

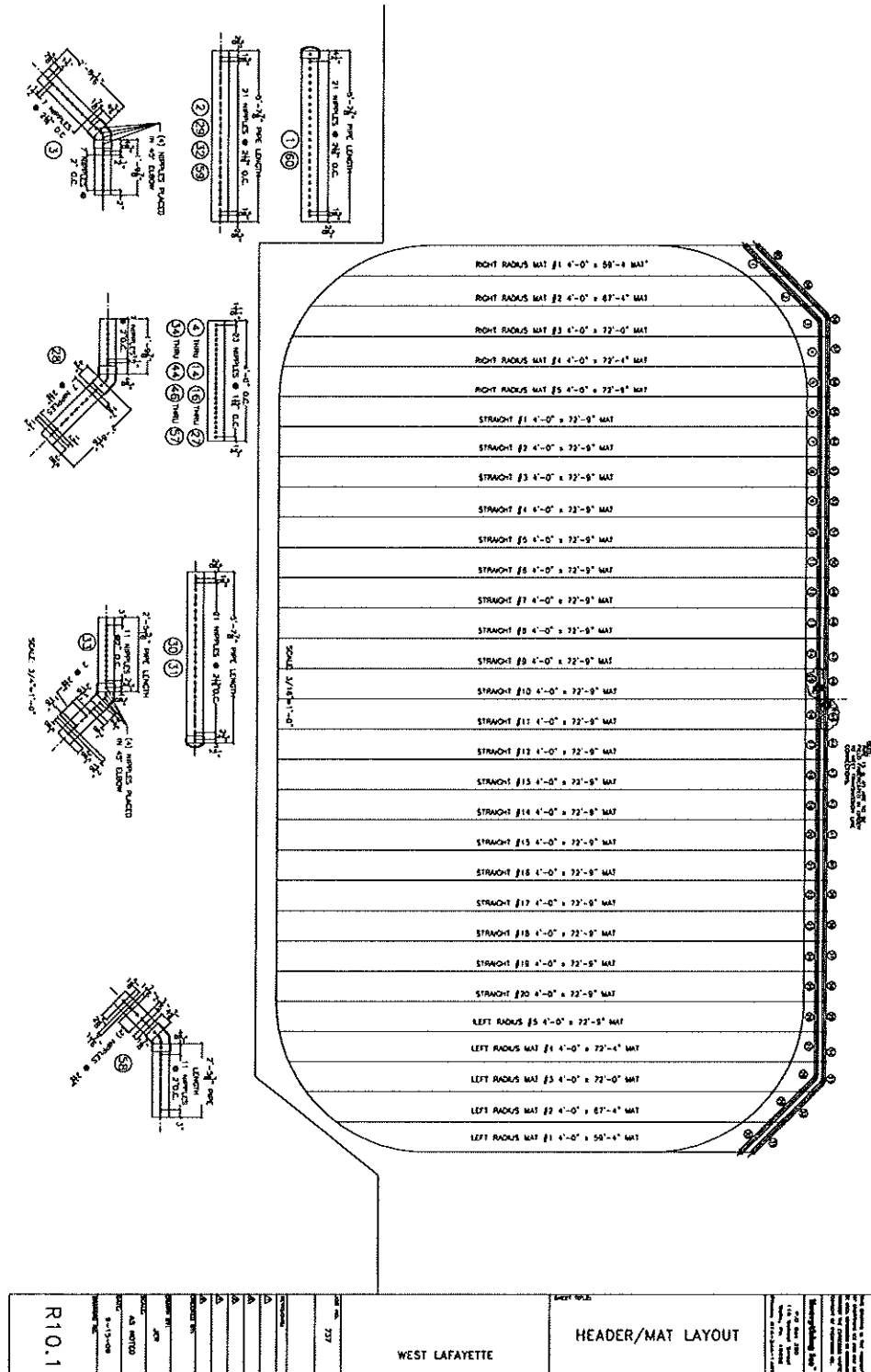
Payment terms may be in installments of: 35% to initiate the custom manufacture of the floor system and provide a retainer for professional services, 30% upon completion of manufacture, 30% prior to shipment, and 5% upon complete assembly of the equipment. Invoices may be submitted for each installment for prompt processing of payment through the issued purchase order.

### Responsibilities of West Lafayette Parks & Recreation:

1. The drilling of holes through the bottom tube of the existing dasher boards (only on the "u-bend" side of the rink), each hole being three (3)-inches on center, and the fabrication of a pin to act as an anchor for the u-bends of the new modular cooling floor. This work shall be completed prior to the Supplier's arrival on the jobsite.
2. Empty drums to collect any remaining glycol collected from the existing cooling slab.
3. A 1 ½ ton all-terrain forklift, or acceptable equivalent, required to off-load and move the equipment at the jobsite.
4. Any and all safety equipment required for general public safety on or about the jobsite during the installation phase.
5. Identified parking in close proximity to the rink for Supplier's personnel.
6. Labor and supervision to move and roll-out the new Icemat-2 floor system and assist the Supplier with the installation of the new valves and piping connections and with other manual labor in relation to the mobilization of the complete rink system.
7. The re-commissioning of the existing refrigeration system, including testing and start-up, to allow continuous work to mobilize the complete rink system in the most-timely manner to allow ice-making at the earliest time possible following the delivery of the new rink components.
8. Understanding and agreement that the work stated above, including the ice-making phase, may require after-hours and/or overnight work.

Additional Information: Lee Booth, Parks Director, West Lafayette Parks and Recreation, (765)775-5125, [lbooth@westlafayette.in.gov](mailto:lbooth@westlafayette.in.gov).

# EXHIBIT "D"





# **Everything Ice™**

September 9, 2009

Mr. Joe Payne  
West Lafayette Parks & Recreation  
6009 West Navajo Street  
West Lafayette, IN 47906-1912

RE: Riverside Ice Rink Problems

Dear Mr. Payne:

Thank you and your staff for your time during my recent site visit and inspection of the Riverside Ice Rink Floor.

Our company has installed over 700 ice rink projects over the last 25 years. I was also involved individually in your project many years ago with the original installation. One aspect of our company's services includes the forensic diagnostic of rink failures and determination for repair. The scope of these services can be reviewed on our consulting web site of [www.icerinkconstruction.com](http://www.icerinkconstruction.com). Through these services we have been engaged by countless engineering, architectural, insurance and legal services providers to both solve rink problems and testify on behalf of litigants involved with such disputes.

Our letter is to offer a professional opinion regarding the problems, history, and possible solutions to the rink refrigeration system failure at the Riverside Rink. The type of failure witness is of the type which has customarily been covered by operator's boiler and machinery insurance policies. We have personally been associated with a half a dozen like circumstances where the boiler and machinery policies covered such failures.

The insurance company should be advised that the timing of this report is the result of your exhausted efforts to investigation and research the problem, the remedies, and the cost implications available given the highly specialized nature of the problems.

## **History & Current Problems of Riverside Ice Rink**

The Riverside ice rink is a winter use outdoor ice skating rink operated approximately 4 months per year during the winter and holiday months. Installation of the system occurred in the 2001 season and has operated regularly since completion.

During the winter of the 2008-2009 skating season, operators noticed a failure which had occurred in the rink floor heat exchanger known in the ice rink industry as the rink piping system. These leaks were evidenced by wet spots caused by leaking propylene glycol becoming visible through the ice sheet and through incipient cracks in the concrete rink floor.

# Everything Ice™

Mr. Joe Payne  
September 9, 2009  
Page 2

Efforts were put forth to repair the leak by local contractors in order to get the complex through the season. A short time after repairing the one leak, other leaks were found towards the end of the skating season.

The rink system is an indirect refrigeration system circulating a propylene glycol solution through a 1" polyethylene piping system located on 3" centers and embedded in a 4000 psi, 5" thick concrete reinforced slab. See Photo "A" attached.

The leaking problems are emanating from a failure of the u-bend connection within the concrete rink floor. The U-Bends are an ABS plastic material which connects the pipes into a continuous feed and return loop system on both ends of the rink. See Photo "B" attached. The main header distribution pipes are located in the center of the rink floor and made of welded steel.

We have included a copy of all original construction drawings for submission to your insurance company.

## Status & Repair Options

The failure of the U-Bends could be caused from an indeterminable number of reasons. The U-Bend being a machined barbed plumbing component could have manufacturing abnormalities where the machining was too deep causing a weak spot. The clamping procedure may have been completed in a defective matter, or the leaks may be caused by some other reason which will never be determined with certainty. However one factor is certain, without a proactive and proper repair or replacement, the floor will continue to experience repeated and unplanned leaks causing the unplanned shut down of the complex and/or a several reduction in ice quality which could be dangerous to the skating patrons of the complex. Because of the trend noticed, the common batch grouping of materials, and the commonality of construction, it is not reasonable to think that repeated leaks will not be ongoing without a major repair process taking place.

### Options To Mitigate Damages and Effect Reliable Operations:

- 1) Install a temporary rink floor grid system for this season.
- 2) Repair or replace the entire concrete floor.

The temporary piping system is an item you have already completed some investigation about. While this is a reliable way to get ice for this season, it certainly is a compromise from a proper operating concrete rink floor. If the city has boiler and machinery insurance, I would suggest this as an alternative to a proper operating concrete floor. The portable systems require extra labor for installation and removal each season in addition to storage requirements.

# Everything Ice<sup>TM</sup>

Mr. Joe Payne  
September 9, 2009  
Page 3

Repairing the concrete rink floor is a real option if cost effective and if this is the route which the insurance provide would want to exercise. The choice for the repair process really resides in their authority provided you and your operation are not compromised.

## Cost For Repairs

The portable systems would cost close to \$ 60,000 in addition to the expenses the city has assumed for the labor and materials it would provide to complete the portable installation for this season. It is reasonable to say that this temporary repair could be close to \$ 80,000 when fully tabulated.

Repair of the floor through replacement of the U-Bends is current being estimated by our estimating department so we do not have an exact number at this writing. Our preliminary estimate for saw cutting both rink ends out and replacing them with steel u-bends and a permanent concrete replacement would be in the \$ 50,000 to \$ 70,000. all-inclusive with fluid storage, disposal, engineering, and system testing. The repair would be significant less than a full system replacement which could easily exceed \$ 250,000.

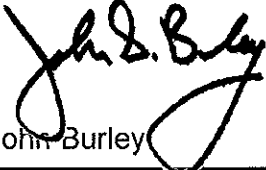
If our company was selected for the entire process, we could provide the rink piping system at a lower price on a trade-in value basis against the concrete repair which could be scheduled for the early spring. We could provide a trade-in value for the system in the spring of \$ 24,500 against the repair work process. Of course, the insurance company will need to be involved with this process.

## Conclusion

We are available to meet with, or discuss this matter with anyone from the insurance company or the engineers of the city. We are available to draft drawings and write specifications for the repair if such documents and information is needed. We should have a confirmed price for the floor repair process this week so that the full financial scope of this repair can be understood.

Should you have any questions or need additional information, please feel free to contact us.

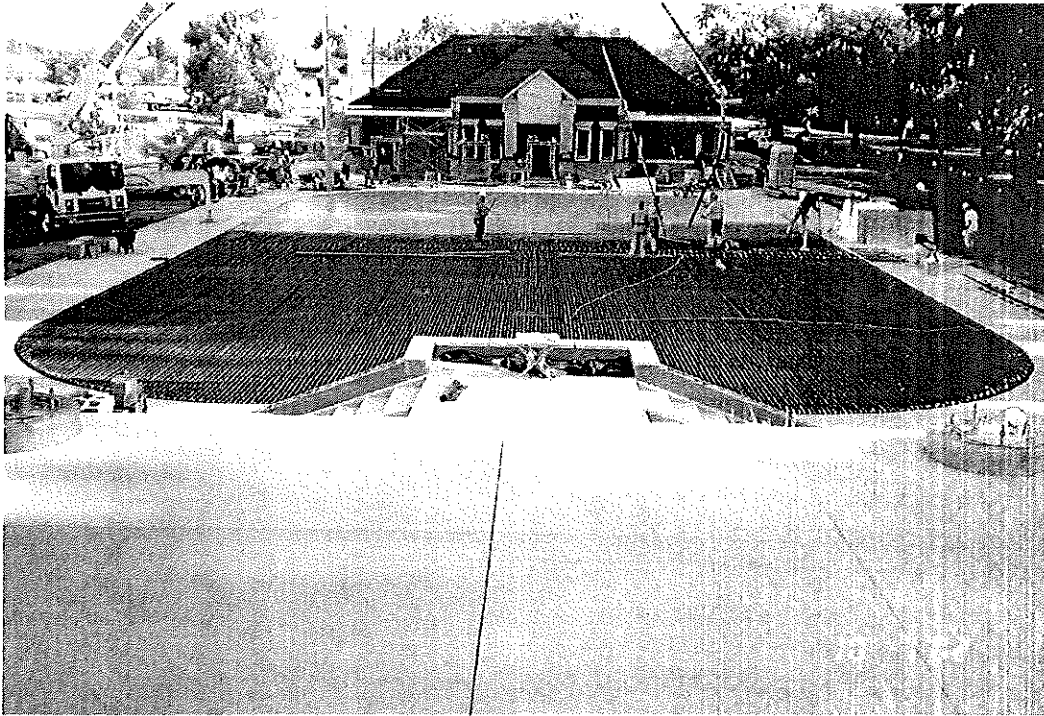
Best regards,



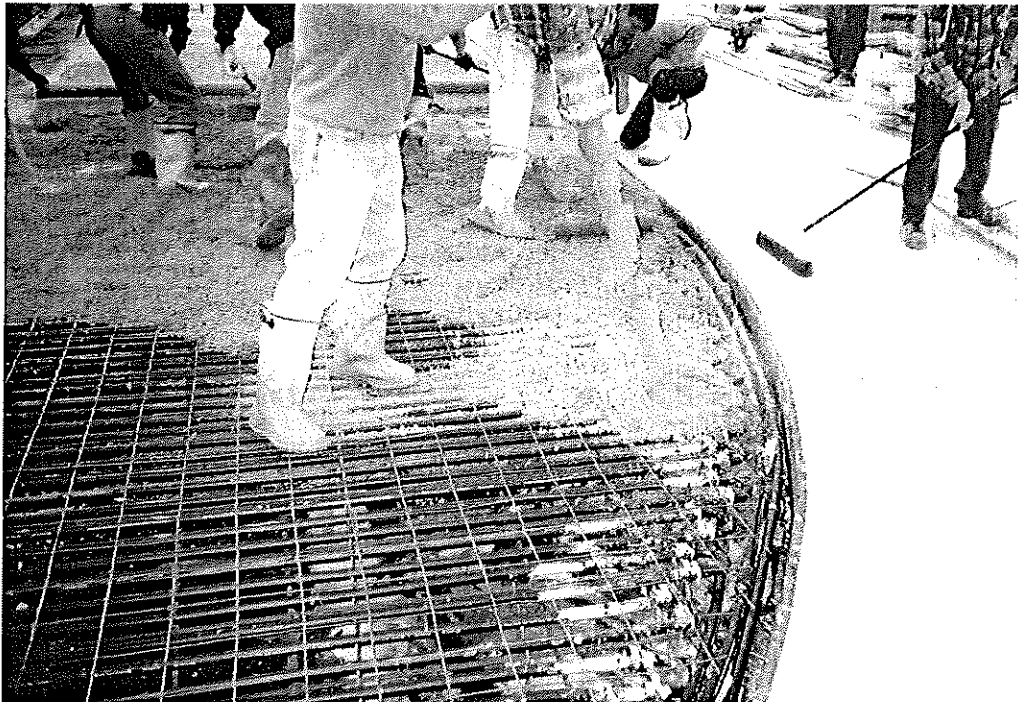
John Burley

# Everything Ice™

**PHOTO "A"**



**PHOTO "B"**



## **ICE RINK SYSTEM REPAIR SPECIFICATION & SCOPE OF WORK JOURNAL**

- Section 1** GENERAL SCOPE
- Section 2** RINK CHILLER SYSTEM
  - a) Start-Up Commissioning Adjustment & Support
- Section 3** RINK PIPING REPAIR PROCESS & MATERIALS
  - a) General Overview
  - b) Demolition & Disposal
  - c) Repair Process
  - d) Evidentiary Documentation & Support
- Section 4** RESPONSIBILITIES OF THE OWNER

## **SECTION 1 - GENERAL SCOPE**

In accordance with sound engineering practices and acceptable methods of design associated with the ice rink industry in general, the rink contractor shall furnish and install the materials and equipment described within the context of this writing.

All products shall be custom manufactured to conform with the existing conditions of the Riverside Ice Rink West Lafayette, In, as represented in the project drawings. The rink contractor will assume all duties required to execute a fully operational Indirect Ice Rink Refrigeration System in strict adherence to the specifications herein. The rink contractor shall also provide engineering support, coordination, and act as overall consultant for all matters relating to the specific nature of rink design.

### **QUALIFICATION STATEMENT**

It is the intention of the contract to have a fully functional ice rink constructed on proven technologies which reflect the demands of the attached specifications. The bidding contractor shall include the talents of a responsible Rink Contractor which specializes in indirect refrigeration systems and has no less than 10 years experience specifically with Everything Ice of the design set forth by these documents.

The refrigeration system specified has certain high energy performance criteria which must be met by the bidding contractor. These stipulations of energy efficiency are mandatory prerequisites to bid. With no exception, the bidding contractor must provide no less than 5 referenced projects in which the ice making system operates in accordance with the high energy efficiency standards of the Rink Chiller described in these documents. The system and references must prove their design provides for a Low KW per ton performance by having the system operate to as low as a 50 degree condensing temperature when weather conditions permit. A copy of references which operate in this manner must be included with the bid documents.

## **CODES**

All labor, materials, and designs set forth by the rink contractor shall be in compliance with the latest published codes governed by local jurisdiction.

- A) OSHA
- B) CITY BUILDING & MECHANICAL CODES
- C) AMERICAN STANDARD OF REFRIGERATION PIPING ASA B31.5
- D) AMERICAN STANDARD OF PRESSURE PIPING ASA B31.1
- E) AMERICAN STANDARD CODE FOR PRESSURE VESSELS
- F) AMERICAN NATIONAL STANDARD B9.1, SAFETY CODE FOR MECHANICAL ENGINEERING
- G) NATIONAL ELECTRIC CODE
- H) ASME CODE
- I) ARI AMERICAN STANDARD 590
- J) UL LISTED
- K) ASHRAE HANDBOOK FOR MECHANICAL ENGINEERING

## **SHOP DRAWINGS**

The rink contractor shall submit comprehensive shop drawings depicting overall design and installation procedure in triplicate to the duly authorized representative of the owner. The following drawings shall be submitted:

- A) Fabrication drawings of the equipment manufactured by the rink contractor and associated accessories.
- B) Total CPM (Critical Path Method) drawing representing the project schedule by the rink contractor and time coordination required of all other contractors.
- C) Site plan showing the location of equipment pads, equipment placement, and other information necessary for proper equipment and work coordination.
- D) Piping isometrics & flow diagrams.
- E) Electrical power and control diagrams depicting the equipment design as well as site electrical work. Electrical drawings should explicitly identify areas of responsibility between the rink contractor and electrical contractor.

## **MUNICIPAL PLANCHECK**

Submittal of sealed plans, engineering calculations, data, etc., as required by the local/state municipality for the purpose of plancheck and approval shall remain the responsibility of Owner's professional Engineer and/or Architect, licensed in the state in which the project shall occur. Owner's Engineer and/or Architect shall be responsible for seals, required attendance at plancheck meetings, coordination, and all other functions necessary to produce a complete set of rink construction plans conforming to, and approved by, local/state codes, ordinances, and regulations. Rink Contractor shall be responsible for providing necessary plans, documents, and information requested by the Engineer/Architect for the purpose of plancheck and approval. Rink Contractor shall supply such plans on CD-ROM in Autocad 14 or later format upon the request of Owner's Engineer or Architect.

## **SECTION 2 - Rink Chiller System**

The refrigeration system for this project is existing. Contractotor will assist with any aspect of start-up where technical assistance, adjustment or modification of the software package is required.



## **SECTION 3 Rink Piping Repair Process & Materials**

### **A) GENERAL OVERVIEW**

The repair process and scope will be to replace both rink ends which contain all of the rink u-bend for the rink floor. The u-bends have proven problematic requiring their complete removal and replacement to ensure a leak free and reliable system.

### **B) DEMOLITION & DISPOSAL**

The floor shall be strategically and carefully demolished through a process of saw cutting the existing floor and removing sections in a manner which does not disturb the existing grade or damage surrounding concrete.

The contractor will be responsible for disposal of all materials to be discarded through the demolition process.

### **C) REPAIR PROCESS**

Repair process shall consist of saw cutting through the slab to the top of the rink floor insulation membrane from the outside edge of the rink expansion joint to as much as 24". The depth will be determined by what is required to provide a proper attachment and repair based upon how the original u-bends were installed.

A secondary score line will be saw cut into the slab 6" beyond the saw cut location. This score line will serve as a neat point to begin the surgical chipping process to expose the rink pipe ends.

The section saw cut from the existing slab will be cross cut into manageable sizes permitting the cut concrete to be removed in sections. With the sections removed, the ends of the pipes will be exposed so they are easily locatable making the chipping process possible without damage to the rink piping system.

At this point the contractor will begin the chipping process to expose 6" of raw pipe so the repairs can be made.

After the pipes are fully chipped loose, the existing slab will be drilled horizontal with a 5/8" hole every 12" on center at an elevation below the rink piping system elevation. Grade 60 rebar dowls will be epoxy glued into the existing slab providing a reinforcement bond between the existing concrete slab and new concrete patch to be installed after the new u-bends are installed.

Before installing the new u-bends, the contractor will replace the vapor barrier and expansion joint which was damaged or removed during the demolition phase.

A small quantity of support chars and rebar shall be fitted into the open floor area to provide a #4 rebar 12" on center in both directions on the repair area. An extra section of rebar shall be fitted around the perimeter and following the radii for attachment of the new steel u-bends.

Schedule 40 welded steel u-bends of a length proper for attachment to the exposed existing pipe ends shall be provided. These U-bend sections will be longer on the start of the radii sections than the center area. The rink contractor will custom make these sections as required for a proper installation.

The U-bends will be secured to the existing piping with two high torque stainless steel hose clamps. Upon full installation, the rink floor shall be pressure tested to 2.5 times anticipated maximum working pressure and held for 24 hours without leakage.

Prior to repouring the end concrete, a bonding agent shall be applied to the face of the existing exposed slab to ensure a solid bond between the old and new concrete surfaces. After pouring, the new concrete shall be covered with a vapor barrier for 14 days to ensure proper curing.

## **D) EVIDENTIARY DOCUMENTATION & SUPPORT**

The rink contractor shall take exceptional care to document the entire process by written record and photographs. Any materials which are significant to the owners insurance claim shall be maintained for the owners use.

rechecked and corrected as necessary after compaction. **For a standard 200 x 85 rink, approximately 225 cubic yards shall be ordered for the lower fine grade.**

## **MATERIALS OF SLAB CONSTRUCTION:**

- 1) **REINFORCEMENT STEEL:** Furnish and install all #4 rebars placed 12" on center *both* ways in the rink proper, with no less than 12" of overlap at joining connections.
- 2) **REBAR ELEVATING SUPPORTS AND PIPE CHAIRS:** All chairs are to act as pipe spacers and rebar supports. Each unit is to extend across the rink width and rest every three feet (3') on center. Elevation of support to the bottom of the rink tubing is to be 2-7/8" above the insulation membrane. A base plate is to be incorporated into the bolster design to avoid penetration into the vapor barrier. Chairs shall be constructed in such a fashion that it is not necessary to "snake" reinforcing rods under the chair members during installation of the rebar.
- 3) **WELDED WIRE FABRIC:** A lower layer of 3" x 3" 10/10 black steel wire mesh shall be installed over the bolsters prior to installation of the piping system for support. The piping system shall then be rolled from its stored position over the lower mesh. While tubing is maintained under pressure, install atop and tie 6" x 6" 10/10 black steel wire mesh reinforcement wire over the entire rink proper. All joints are to be a minimum of six inches (6") and are to be cut two inches (2") from the rink perimeter border. ***(Lower layer of 3" x 3" WWF is necessary only with mat type embedment installations in concrete.)***

- 4) **CONCRETE HEIGHT:** Overall five inch (5") slab. Concrete above tubing should be 1-1/8" with a *finish tolerance of plus or minus 1/8" over 10 feet. Maximum deviation shall not exceed 3/8"*.
- 5) **EXPANSION JOINT:** Furnish and install between new rink slab and concrete rink perimeter, a one inch (1") impregnated board with Vulchem #45 Sealant or approved equal. The expansion joint should be concealed underneath the proposed dasher board system.
- 6) **SURFACE FINISH:** After proper vibration, the slab shall be floated and worked to a troweled finish. Water usage during the troweling process is not permitted.
- 7) **CONCRETE CONSOLIDATION:** Mechanical vibration equipment must be utilized by experienced operators throughout the pour to ensure proper placement of concrete around all reinforcement steel and tight bonding between the rink tubing. Care will be taken as not to hit tubing or bolsters during the process. Excessive over vibration, which will cause segregation of the mixture, must not be allowed.
- 8) **CURING PROCESS:** Upon completion of finishing, the entire rink proper shall be covered by a vapor barrier for a wet cure of a minimum of 14 days after the pour date.
- 9) **CONCRETE MIXTURE:**

**Specifications:**

Comprehensive strength at 28 days:	4000 PSI
Portion of structure:	Rink Slab
Size of coarse aggregate:	3/4"
Maximum Allowable Slump:	4" to 5"
Entrained air content:	4% to 6%

**Materials:**

Cementitious materials:	Type I Portland
Cementitious Content	620 lbs
Fine Aggregate Sand:	Sieve 100 ASTM C33
Fine Aggregate Qty LBS:	1300 lbs
Coarse Aggregate:	3/4" Gravel ASTM C33
Coarse Aggregate Qty. LBS:	1700 lbs
Total Water:	34.5 gals - 288 lbs
(3/8" pea gravel shall be used for mat type embedment systems)	

## **SECTION 4 - RESPONSIBILITIES OF THE OWNER**

Any materials, construction, engineering, or labor required to complete the rink facility to an operational mode other than those indicated as responsibility of the rink contractor become the obligation of the owner. The rink contractor shall remain obligated to coordinate work between trades and with the owner during the installation.

Items required but not supplied under rink contractor responsibility include, but may not be limited to the following:

- All duties of other contractors.
- Other building construction.
- Building/construction permits, licenses, applicable taxes & associated fees.
- Municipal inspection coordination & fees.
- Protection from construction delays due to the activities of other contractors in the work area.
- Creation of the first ice sheet: hockey lines, painting, logos, etc.